

REMARKS

Applicants respectfully request the Examiner to reconsider and again examine the claims in view of the following remarks and in accordance with the provisions of 37 C.F.R. 1.116.

Claims 1-67 are pending in the application. No claims are presently allowed and no claims have been amended or cancelled by this amendment. In accordance with the revised provisions of 37 C.F.R. §1.121(c) as enacted on July 30, 2003, a copy of the claims is provided hereinabove.

The Examiner rejected claims 1-67 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,134,003.

In determining whether a claim in a patent application defines merely an obvious variation of an invention disclosed and claimed in an issued patent, only those portions of the issued patent which support the patent claims may be considered. Otherwise, the specification of the issued patent may be used only as a dictionary to learn the meaning of terms in the patent claims. Thus, only patent claims 1-16 and those portions of the U.S. Patent No. 6,134,003 which support the patent claims 1-16 may be considered in determining obviousness of the claims 1-67 of the instant application (i.e., application serial number 09/709,162).

Applicant's instant claim 1 recites ...a spectrally encoded endoscopic probe capable of having spatially encoded location information comprising ... the dispersive element through which energy is transmitted or reflected such that said energy spectrum is dispersed ... means for focusing said dispersed energy onto a sample such that the impingement spot for each wavelength is at a distinct location on said sample, the spectrum of wavelength defining a wavelength encoded axis ... means for scanning said sample with said focused energy in a direction from said wavelength encoded axis ... and ... means for receiving energy reflected from said sample.... Applicants submit that none of claim elements set for the in claim 1 of the instant application 09/709,162 are set forth in claims 1-16 of U.S. Patent No. 6,134,003.

Applicants submit that those portions of the patented specification which support the patent claims 1-16 neither describe nor suggest the above-recited elements in Applicant's claim 1. Thus, Applicants submit that claim 1 is not obvious in view of claims 1-16 of U.S. Patent No. 6,134,003.

Applicant's claims 2-25 which further limit base claim 1 either directly or indirectly add further patentably distinct limitations when taken together with base claim 1. Therefore, Applicants submit that claims 2-25 of the above-identified application serial number 09/709,162 do not merely define an obvious variation of an invention disclosed in claims 1-16 in U.S. Patent No. 6,134,003.

Independent claims 27, 32, 33, 34, 35, 60, 66 and 67 each includes limitations similar to those discussed above in conjunction with claim 1. Thus, each of these independent claims are also seen as not being obvious in view of claims 1-16 of U.S. Patent No. 6,134,003.

Similarly, claims 28-31, 36-47 and 61-65 which depend from respective ones of independent claims 27, 35 and 60 are also seen as being patentably distinct in view of claims 1-16 of U.S. Patent No. 6,134,003.

Applicant's independent claim 26 calls for a spectrally encoded endoscopic probe capable of having spatially encoded location information ... comprising ... an optical head associated with a distal end of said energy conducting member, said optical head capable of rotational or transitional movement with respect to said body. Claims 1-16 of U.S. Patent No. 6,134,003 are seen as neither describing nor suggesting Applicant's claim 26.

Applicant's independent claim 48 calls for a multifiber catheter having at least one imaging fiber and at least one therapeutic-like energy delivering fiber. Claims 1-16 of U.S. Patent No. 6,134,003 do not mention a system having one imaging fiber and at least one therapeutic-like energy delivering fiber as called for in claim 48.

Claims 49-54 each depend from independent claim 48 and thus are also patentably distinct in view of claims 1-16 of U.S. Patent No. 6,134,003 when taken together with base claim 48.

Independent claim 55 calls for a multifiber imaging apparatus using spectrally encoded information ... comprising ... a plurality of flexible energy conducting fibers ... an imaging head associated with each of said fibers ... and ... at least one detector associated with plurality of fibers ... . Thus, claim 55 is not obvious in view of claims 1-16 of U.S. Patent No. 6,134,003.

Independent claim 56 of application number 09/709,162 calls for an imaging apparatus ... comprising ... a plurality of optical fibers defining an array ... a plurality of lens, each lens associated with distal end of each optical fiber as part of said array, such that each lens is capable of focusing energy transmitted from an energy source through said array on a distinct position on a target sample. Applicant's submit that claim 56 is not obvious in view of claims 1-16 of U.S. Patent No. 6,134,003.

Claims 57 and 58 further limit base claim 56 and thus are also patentable distinct over claims 1-16 of U.S. Patent No. 6,134,003. In view of the above, Applicants submit that claims 1 – 67 are patentably distinct in view of claims 1-16 of U.S. Pat No. 6,134,003.

The Examiner further rejected claims 1-67 under 35 U.S.C. §103(a) as being unpatentable over Boppart et al. (U.S. Patent No. 6,485,413).

Applicants submit that claim 1 is patentably distinct over Boppart since Boppart neither describes nor suggests ...a spectrally encoded endoscopic probe capable of having spatially encoded location information comprising ... a dispersive element through which energy is transmitted or reflected such that said energy spectrum is dispersed ... means for focusing said dispersed energy onto a sample such that the impingement spot for each wavelength is at a distinct location on said sample, the spectrum of wavelength defining a wavelength encoded axis ... means for scanning said sample with said focused energy in a direction from said wavelength

encoded axis ... and ... means for receiving energy reflected from said sample... as called for in claim 1.

Boppart neither describes nor suggest using a dispersive element as called for in Claim 1.

Applicants would like to point out that the term dispersive element as used in the instant application and in the claims refers to an element which separates (in an angular or spatial sense) wavelengths. Simply put, the dispersive element makes wavelengths propagate in different directions. One example of a dispersive element given in the patent application is a grating.

The Examiner appears to be equating the claimed dispersive element with dispersion which occurs when signals propagate in an optical transmission fiber (sometimes referred to as propagation dispersion). Propagation dispersion refers to the "spreading" of the signal in the direction of propagation (e.g. a light pulses spread or stretch as they propagate through the fiber). Thus, propagation dispersion in a transmission fiber is a generally unwanted and undesirable characteristic of the fiber since it limits the capacity of the fiber to transmit a signal. Moreover, the dispersion pointed out by the Examiner is not a separation of the wavelengths as called for in Applicants claims.

Claims 2-25 each depend, either directly or indirectly, from base claim 1 and thus claims 2-25 are patentably distinct over the cited reference generally for the reasons discussed above in conjunction with claim 1.

Claim 26 is patentably distinct over Boppart since Boppart neither describes nor suggests ... a spectrally encoded endoscopic probe capable of having spatially encoded location information ... comprising ... a body having a proximal end and a distal end ... an elongated flexible energy conducting member having a proximal end and a distal end ... an optical head associated with said distal end of said energy conducting member, said optical head being capable of rotatable or translational movement with respect to said body ... as called for in Claim 26.

In Boppart, as shown in Figs. 5a and 5b for example, the entire device moves across a specimen and thus an optical head does have translational or rotational movement with respect to a body as called for in claim 26. Thus, claim 26 is patentably distinct over the cited reference.

Claim 27 is patentably distinct over Boppart since Boppart neither describes nor suggests ... a method for imaging, comprising ... providing an endoscopic probe capable of having spatially encoded location information, comprising ... a dispersive element through which ... energy is transmitted or reflected such that said energy spectrum is dispersed....

Claims 28-31 each depend, either directly or indirectly, from base claim 27 and thus claims 28-31 are patentably distinct over the cited reference generally for the reasons discussed above in conjunction with claim 27.

Independent claims 33-35 each call for ... a dispersive element through which ... energy is transmitted or reflected such that said energy spectrum is dispersed. Thus claims 33-35 are each patentably distinct over Boppart since Boppart neither describes nor suggests a system which includes ... a dispersive element through which ... energy is transmitted or reflected such that said energy spectrum is dispersed ... as called for in claims 33-35.

Claims 36-47 each depend, either directly or indirectly, from base claim 35 and thus claims 36-47 are patentably distinct over the cited reference generally for the reasons discussed above in conjunction with claim 35.

Claim 48 is patentably distinct over Boppart since Boppart neither describes nor suggests ... a multifiber catheter having at least one imaging fiber and at least one therapeutic-like energy delivering fiber as recited in claim 48.

Claims 49-54 each depend from independent claim 48 and thus are also patentably distinct over Boppart generally for the reasons discussed above in conjunction with claim 48.

Independent claim 55 calls for a multifiber imaging apparatus using spectrally encoded information ... comprising ... a plurality of flexible energy conducting fibers ... an imaging head associated with each of said fibers ... and ... at least one detector associated with plurality of fibers .... Thus, claim 55 is patentably distinct over Boppart since Boppart neither describes nor suggests ... a plurality of flexible energy conducting fibers ... an imaging head associated with each of said fibers ... and ... at least one detector associated with plurality of fibers .... as recited in claim 55.

Claim 56 is patentably distinct over Boppart since Boppart neither describes nor suggests ... an imaging apparatus ... comprising ... a plurality of optical fibers defining an array ... a plurality of lens, each lens associated with distal end of each optical fiber as part of said array, such that each lens is capable of focusing energy transmitted from an energy source through said array on a distinct position on a target sample ... as called for in Claim 56.

Claims 57 and 58 each depend from and thus include the limitations of base claim 56 and thus are also patentable distinct over Boppart generally for the reasons discussed above in conjunction with claim 56.

Claim 59 is patentably distinct over Boppart since Boppart neither describes nor suggests ... an imaging apparatus, comprising ... an optical fiber having an outer surface ... and ... a plurality of means for focusing a source of energy onto a distinct target position; each focusing means being spaced along said outer surface, wherein said energy source is spectrally encoded as called for in Claim 59.

Claims 60, 66 and 67 are each patentably distinct over Boppart since Boppart neither describes nor suggests ... an endoscopic probe capable of having spatially encoded location information, comprising ... at least one flexible energy conducting member ... a source of energy ... a dispersive element through which said energy is transmitted or reflected such that said energy spectrum is dispersed ...[and]... means for focusing said dispersed energy onto a

sample such that the impingement spot for each wavelength is at a distinct location on said sample, the spectrum of wavelength defining a wavelength encoded axis ... as called for in each of Claims 60, 66 and 67.

Claims 61-65 each depend from and thus include the limitations of base claim 60 and thus are also patentable distinct over Boppart generally for the reasons discussed above in conjunction with claim 60.

In view of the above, Applicants submit that the rejection of claims 1-67 under 35 U.S.C. §103(a) should be removed.

In view of the above amendment and remarks, Applicants submit that claims 1-67 and the entire case are in condition for allowance and should be sent to issue and such action is respectfully requested.

The Examiner is respectfully invited to telephone the undersigning attorney if there are any questions regarding this Amendment or this application.

The Assistant Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 500845.

Dated: \_\_\_\_\_

Respectfully submitted,

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